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WHO IS OUT THERE?
TACTICAL RECONNAISSANCE FORMATIONS
FOR THE HEAVY DIVISION

A Monograph
by
Major James G. Diehl
Armor

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Formations for the Heavy Division

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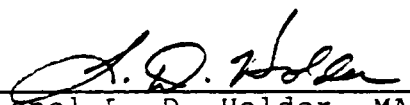
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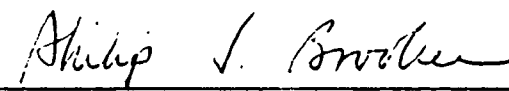
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ABSTRACT

WHO IS OUT THERE? TACTICAL RECONNAISSANCE FORMATIONS FOR THE HEAVY DIVISION by MAJ James G. Diehl, USA, 46 pages.

The purpose of this monograph is to examine the organization of tactical reconnaissance formations within the heavy division to determine how they should be organized to accomplish the missions they will be assigned.

The Army of Excellence has significantly lightened the Divisional Cavalry Squadron and, as a result, numerous critics have raised a great hue and cry about the demise of cavalry's tanks and ground reconnaissance capability. This monograph will historically examine the operations of tactical ground reconnaissance units of the Germans, the Russians, and the Americans during World War II in the European Theater of Operations. Specifically, we will examine the type of missions that were assigned to reconnaissance units; whether they fought for information or depended on stealth; and, finally, whether they used ad hoc reconnaissance groups or heavy organic reconnaissance assets to seek tactical combat information.

After an analysis of Soviet reconnaissance doctrine and a comparison with American doctrine, we can safely conclude that the heavy division's tactical reconnaissance formations need to be able to flexibly employ all types of combat units and utilize both stealth and combat techniques to extract information on the enemy. However, the source for these extensive capabilities is carried within the heavy division itself. Infantry and tank units, as well as engineers, artillery, aviation, and others must be prepared to conduct the reconnaissance mission within their capabilities and reinforce the efforts of the scouts and cavalry. We must realize in our doctrine and our training that reconnaissance is a combined arms affair which cannot be left solely to the scout.

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Know your enemy and know yourself; and in one hundred battles you will never be in peril. When you are ignorant of the enemy but know yourself, your chances of winning and losing are equal. If ignorant both of your enemy and of yourself, you are certain in every battle to be in peril. (1)

Sun Tzu in The Art of War

I. INTRODUCTION

Even several thousand years ago, military leaders recognized the advantages of having accurate and dependable intelligence on the opponent's forces, i. e. their composition, disposition, and intentions. Modern war has grown no less dependent on such knowledge and in modern military units a tremendous quantity of resources is dedicated to gathering intelligence. These resources include electronic devices for monitoring the distinctive electromagnetic emissions of military formations, satellite platforms, and an array of sensors which can peer hundreds of kilometers beyond the lines of combat into the enemy's rear areas to watch his preparations.

Nevertheless, tactical commanders continue to depend on the eyes and ears of the soldier on patrol to confirm or deny what his plethora of electronic devices have indicated to him from beyond the

range of his senses. For the division commander and his subordinates, these "eyes" are organized into a scout or cavalry organization which is designed and trained to serve as the "eyes and ears" of the higher commander.

From the times of Murat and Jeb Stuart until today, the issue for reconnaissance formation force designers has been balancing the mobility and speed needed to be effective "eyes and ears" with sufficient firepower and protection needed to extract information from an uncooperative enemy and to survive on an increasingly lethal battlefield. The purpose of this study is to determine if the present organization of the heavy division's tactical reconnaissance formations is appropriate for the type of missions it can be expected to carry out. I intend to follow an historical approach by studying the tactical operations of reconnaissance units of the Germans, the Americans, and the Russians during World War II to determine how their techniques and organizations changed during the war and what lessons they felt they had learned by the end of the war in functioning on the mechanized battlefield.

The length of this paper requires placing certain limitations on the scope. Therefore, other Allied points of view will not be included nor will the Pacific theater of war play any part. The focus is on tactical combat in the European theater conducted by the Germans and Americans, and the Germans and Russians. This approach is, nevertheless, valid as the Americans were the overwhelming contributors of combat troops in the west European theater and the Great Patriotic War was, in fact, the largest mechanized land war conducted in history. Therefore, the three most influential

participants will be examined and, while overlooking the others, we trust that their observations will coincide.

In addition, the campaigns in Europe are very instructive and applicable to the employment of the modern heavy division. Given the fact that nearly half of the Army's heavy divisions are already stationed in Europe and the other half's first wartime mission is to reinforce those units if war breaks out in Central Europe, it would appear to serve our purpose to restrict our study to divisional operations conducted by mechanized forces in the European theater. World War II provides us with significant insight into the conduct of mechanized ground warfare in Europe.

It is important to establish what we mean when we say tactical reconnaissance. Reconnaissance is defined in FM 17-95 as "surveillance; that is, systematic observation by any means." (2) Tactical reconnaissance will, therefore, be information gathering that has an impact on tactical performance. This will include information on the terrain, its trafficability, obstacles (natural and man-made), and, most importantly, the enemy. FM 17-95, interestingly enough, does not list the enemy among its "information of tactical significance" when defining reconnaissance. (3) Nevertheless, we will consider enemy information as being the predominant item to be sought by reconnaissance formations. Information such as enemy formations, dispositions, locations, state of readiness, and gaps in defenses will have an overwhelming impact on our own tactical performance.

The next item of business is to establish how we will evaluate the various formations being examined. Since the issue is how to

best organize modern tactical reconnaissance units, we must look at the organizations used by nations we are examining. What types of missions were given to the reconnaissance forces to accomplish? Did their doctrine or wartime experience lead them to believe that they would have to fight for combat information or that stealth would serve them better? And finally, how was the force organized to obtain combat information; i. e. were heavily reinforced reconnaissance units or ad hoc task forces utilized?

At this juncture, current Soviet and American doctrine on the employment of formations to obtain tactical intelligence will be examined. It must be determined if American doctrine incorporates the lessons of World War II and if the Army force structure organizes its tactical reconnaissance formation to perform the missions necessary in the face of Soviet capabilities and intentions. If the doctrine and organizations are found lacking, what can be done to address those deficiencies and give the reconnaissance formation a realistic chance of accomplishing its missions and surviving?

II. GERMAN TACTICAL RECONNAISSANCE

At the beginning of the war, the Germans had developed far beyond any of the other participants in the conduct of tactical mechanized warfare. Certainly everyone had their visionaries (Fuller, deGaulle, Tukhachevskiy, Patton), but the Germans had developed a combined arms mechanized force and was training its subordinate leaders to fight it.

One future German general, Heinz Guderian, wrote in 1937 that mobile formations would need mechanized reconnaissance forces. By his definition, these forces would need to be "highly mobile, flexible, and easily handled." He envisioned that these forces would be small, but organically capable of defeating other reconnaissance forces. Their primary function would be to observe and report without being detected by using a combination of speed and stealth. They would, therefore, be equipped with a heavy armored scout car that would provide the necessary combination of both. Guderian further realized that, at times, the reconnaissance formations would be required to fight for intelligence and, in fact, could be assigned combat missions. He maintained, however, that before they could be realistically expected to carry out such a mission they must be reinforced with engineers, infantry, tanks, and anti-tank guns. (4)

As a result of such German visionaries as Guderian, the German divisions at the start of World War II were organized with combined arms reconnaissance formations. The infantry divisions which were essentially foot-mobile and horse-drawn possessed a reconnaissance battalion consisting of a horse troop, a bicycle troop, a heavy weapons troop, and a communications platoon. It was essentially a light unit which performed reconnaissance and served as messengers with its horses and motorcycles. It, nevertheless, had three 75mm anti-tank guns, three armored cars, three 20mm anti-aircraft guns, and four 81mm mortars and two 75mm infantry howitzers. The panzer divisions and panzergrenadier divisions had reconnaissance battalions consisting of an armored car company, a light armored

reconnaissance company, an armored reconnaissance company, a heavy weapons company, and a support company. It fielded thirteen self-propelled anti-tank guns and thirty-five 20mm combination anti-aircraft and anti-tank guns. This unit was more mechanized and mobile than its counterpart in the infantry division, but, of course, it needed to be in order to give the division the flexibility it required. (5)

On June 21, 1941 the armies of Germany invaded the Soviet Union and began the greatest land conflict in this century. Early operations of divisions typically followed closely the pre-war doctrine and training concepts expressed by men like Guderian. As an example, the 78th Infantry Division in July of 1941 had been left far behind by the lead panzer and panzergrenadier formations of Army Group Center. The lead formations had bypassed Mogilev and, as the 78th Infantry Division brought up the rear of XIII Corps, the commander, General Gallenkamp, received orders from his corps commander to remove a threat to the corps line of communication from bypassed Soviet forces in Mogilev. General Gallenkamp deployed his division to attack Mogilev with three regiments abreast and positioned the unreinforced reconnaissance battalion to conduct a zone reconnaissance across the division front. The bicycle troop was held out as part of the division reserve. On 22 July, the attack of the division was successful for the most part. However, a threat to the right flank regiment was created by a vigorous counterattack from Soviet motorized forces along a highway overlooked by the reconnaissance battalion. The situation was salvaged and stabilized by the rapid commitment of the division's reserve. (6)

However, the success of this mission did not prevent Gallenkamp from grossly misusing his reconnaissance battalion soon afterward. On 23-26 July, the reconnaissance battalion was withdrawn to serve as a mobile reserve for the division as it rested and refitted in a bivouac site. The division was surprised and roughly handled by two Soviet motorized corps, the LXI and the XX Motorized Corps, while in bivouac. (7) To capitalize on its mobility compared to the infantry regiments, the reconnaissance battalion had been concentrated in a reserve role rather than dispersed in a collection effort.

As time went by in Operation Barbarossa, the Germans began employing their reconnaissance battalions to accomplish missions other than reconnaissance. In Army Group South in late August, the Soviet 5th Army was withdrawing in the face of heavy pressure from the German 6th Army. On 22 August, the 111th Infantry Division of LI Corps organized its reconnaissance battalion to maintain contact with and pursue the retreating Soviets. Major Hoffman-Schoenborn, the battalion commander, was reinforced with two assault gun batteries, a motorized 100mm gun battery, two AT companies, a motorized engineer company, and three bicycle companies. Task Force Hoffman moved rapidly to grant the Soviets neither rest nor an opportunity to organize a defense. The operation was largely successful in destroying large numbers of Soviets, however, it fell short when assault crossings on the Dneper in vicinity of Pristany and on the Desna River at Oster could not be protected from Soviet artillery fire. (8)

The flexibility of mechanized units and the subsequent atypical employment of their reconnaissance battalions is shown by 19th

Panzer Division's participation in the Velikiye Luki encirclement of the Soviet 22d Army. The basic plan called for the three infantry divisions of XL Panzer Corps to breakthrough the defenses followed by the commitment of LVII Panzer Corps' two panzer divisions, including the 19th, to exploit the penetration, linkup with XXIII Corps, and complete the encirclement. General von Knobelsdorff, the 19th Panzer Division commander, reinforced his reconnaissance battalion with an anti-tank company and ordered the commander, Major Booth, to move with the 110th Infantry Division of the leading XL Corps. In this manner, the reconnaissance battalion would report on the progress of the leading infantry and provide General von Knobelsdorff with information on their commitment. (9) The 19th Panzer Division's reconnaissance battalion was providing the commander with what, he decided, was essential friendly information.

As the war progressed in the east, problems arose for the Germans. They suffered significantly higher casualties than they had anticipated and the growing shortage of personnel replacements had a significant impact on the sustainability of the reconnaissance battalions. Reconnaissance became the venue of specially organized task forces created for specific missions.

In the infantry divisions the lack of mobility and Soviet possession of the initiative eventually forced their formations into a static defensive posture. As a result, the reconnaissance battalions were disbanded after the winter of 1941-42 and formed into Fusilier Battalions which were, in reality, infantry battalions. (10) Therefore, the reconnaissance effort was strictly in the hands of specially formed patrols or ad hoc units.

In the mechanized and armored divisions, reconnaissance units received missions not typically assigned to them. Their organic mobility became their greatest asset as the commanders sought additional combat power. Frequently, they were employed as a kind of forward detachment to move deep and seize important or critical terrain features for the division. In such cases they were heavily reinforced or served as a reinforcement to a regiment.

In December 1942, the 6th Panzer Division and 23d Panzergrenadier Division of LVII Corps and 4th Panzer Army were attempting to relieve the 6th Army at Stalingrad through an attack toward Kotelnikovo. The LVII Corps had been through heavy fighting during the Russian attack which trapped 6th Army and it was significantly weakened by its fighting to alleviate the crisis facing the German troops around Stalingrad. Nevertheless, it was committed to the relief effort and the commanders found themselves task organizing special units in the face of an unclear enemy situation. On 16 December as the attack reached within 35 miles of the beleaguered 6th Army, the reconnaissance battalion of the 6th Panzer Division reinforced the 114th Infantry Regiment's attack on the town of Verkhniy Kumskiy. (11) The attack was successful but massive Soviet counterattacks on the German flanks at the Chir River forced 4th Panzer Army to withdraw forces and weaken their efforts to reach Kotelnikovo.

By the late stages of the war, panzer divisions were divisions in name only and the same could be said of reconnaissance battalions. In March 1945, an improvised panzer division consisting of 55 tanks was attempting to defend Kuestrin on the Oder River from

strong Soviet attacks. The reconnaissance "battalion" consisted of five Panther tanks and combined with the "division's" C company to destroy 60 Russian tanks in defeating one of many attacks on its positions. (12) It appears that the Germans at this stage were grabbing any formation of any description to hold the line and the performance of tactical reconnaissance had been decentralized to extremely low tactical levels. Special formations to secure combat information would have to be pieced together by individual commanders from whatever combat units and reconnaissance units were available.

III. ANALYSIS

In analyzing the German reconnaissance experience it is important to note that the most pervading influence on their efforts was the enormous casualties on all types of troops suffered in the war in the East. This undoubtedly forced them into expedients they had not foreseen.

Missions for Reconnaissance Forces: Pre-war German doctrine envisioned the acquisition of combat information as the dominant mission for reconnaissance formations. Initially, the German commanders employed their battalions to accomplish just those missions. However, the war with the Russians turned out to be more vicious than the Germans had anticipated. Not long into the war the strength of German divisions had been depleted to such a degree that the generation of combat power became a prime concern for German commanders. As a result, the reconnaissance battalions came to be

employed in a variety of missions for which they were neither prepared nor organized. Combat missions for reconnaissance battalions became the norm as the war progressed and it was not unusual for the battalions to serve as a mobile reserve or blocking force or forward detachment. The nature of mechanized warfare and the lethality of the modern battlefield had blurred the distinction between missions for combat forces and reconnaissance forces.

Stealth versus Fight for Intelligence: The Russian soldier was a formidable enemy and the Germans rapidly learned that they were to be granted no respite from his savage attacks and counterattacks. Reconnaissance efforts were to be contested at every turn. The Germans found themselves fighting for whatever information was gleaned from reconnaissance. The Germans' stealth tactics overlooked bypassed Soviet strongpoints which caused extensive problems for following forces. The 78th Infantry Division learned this to their regret at Mogilev when they overlooked an avenue of approach used by Soviet motorized forces into the division's flank. The Germans were forced to send heavier and heavier formations to conduct combat missions such as attack and defend to gather intelligence on the enemy. The 6th Panzer Division had learned this by late 1942 in sending the reconnaissance battalion with an infantry regiment to attack and clarify the situation in front of it during the attack on Verkhniy Kumskiy. The Germans had to reinforce their reconnaissance efforts with tanks, artillery, engineers, and infantry, and commit these ad hoc forces to combat missions which served to force the enemy to reveal critical information.

Ad Hoc Units or Organic Reconnaissance: The problem of

acquiring current combat information on the Russians did not get any easier as the war progressed in the East. In fact, it became enormously difficult. Eventually, the Germans were forced into solutions for which they were not adequately prepared. The reconnaissance battalions were forced into missions that blurred the distinction between stealth reconnaissance and heavy combat. In order to have any hope of acquiring combat information they had to be augmented and reinforced to enable them to get the information and survive. Tanks, infantry, artillery, and, even, reconnaissance units would be formed into task forces and deployed to fight and reveal Russian intentions and dispositions. Reconnaissance had become everybody's business.

IV. RUSSIAN TACTICAL RECONNAISSANCE

Despite the performance of the Red Army in Finland and in the early stages of the Great Patriotic War, the 1936 Field Regulations of the Red Army show a significant grasp of the basic concepts of mechanized warfare. Led by the Soviet marshal, Mikhail Tukhachevskiy, the Soviets in the inter-war years had developed a doctrine which largely predicted the nature of modern mechanized warfare as it would appear on the Soviet steppes. (13) Particularly important to this paper is the tremendous Soviet emphasis on tactical reconnaissance throughout the depth of the enemy's formations.

The purpose of reconnaissance in the 1936 Regulations is to "determine as accurately as possible the enemy battle formation and

artillery deployment; it should recognize his open flanks or unoccupied sectors; it should investigate the depth of the defense zone, the composition of defense forces, and the type and solidity of engineer terrain improvements." (14) Obviously, the Soviets envisioned an important role for their reconnaissance formations. They, therefore, recommended that special reconnaissance formations of all arms be organized to conduct tactical reconnaissance. These formations would penetrate as deeply as possible to determine the exact composition of the enemy defenses and attempt to capture prisoners. Specific goals would be defined for the reconnaissance formation by the higher commander since "reconnaissance which is spread all over the front without specific objectives in an even and generalized manner is useless." (15)

The Soviets envisioned that tactical reconnaissance would be an all arms affair and their organization reflected this. Rifle divisions had organic reconnaissance companies and the regiments had reconnaissance platoons. However, these formations were typically dismounted and used for deep penetrations by small detachments for observation and prisoner snatches. (16) When tactical reconnaissance requiring combat was called for, a battalion or regiment was reinforced and committed to ascertain the nature of the enemy's defenses.

The 1944 Field Regulations of the Red Army demonstrated continuing Soviet development in the specific how-to knowledge of the conduct of mechanized warfare and tactical reconnaissance, but did not drastically alter Soviet concepts as expressed in the pre-war literature. The Soviets had been through a learning process

which gave them ample opportunity to test their concepts and institute specific techniques which they found to be successful. The 1944 Regulations found their reconnaissance theories to be generally sound. (17)

In October 1943, a German infantry regiment occupied defensive positions approximately 20 miles south of Kiev. The Soviets intended to attack in the sector and required intelligence on the nature of German defenses. They opted to employ combat forces to seek the required information. Using the cover of artillery fire, the Soviets brought four tanks to covered and concealed positions near the German lines. A 20 man patrol from a Russian rifle company infiltrated to the tanks' position under the cover of darkness and dug in and hid during the day. At dusk, the Soviets came out of hiding, mounted the tanks, and drove rapidly through the German lines before the surprised defenders could react. The Soviets penetrated to a key hill top and occupied hasty defensive positions in the German rear before the Germans could bring up anti-tank guns to root them out. Two hours later the Russians remounted and sped back to their own lines without losses. (18) This excerpt demonstrated the extensive preparations the Soviets were willing to expend to conduct tactical reconnaissance. The operation unnerved the Germans and gained valuable tactical intelligence for the Soviets on the German defenses.

By late 1943 the Soviets were pursuing deep reconnaissance tactics to depths of 25-30 kilometers behind the defenses. A good deal of this reconnaissance was conducted by small dismounted detachments of squad and platoon strength. These patrols would

penetrate to great depths and set up static and mobile observation posts which would monitor and report German troop movements, establish the German unit boundaries, determine the locations of subsequent defensive belts, and pinpoint the positioning of reserves. As time went by and the situation became more fluid, these deep penetration forces became stronger and more mobile. As a result, their missions more and more became combat raids rather than reconnaissance. One account described a mobile force consisting of a platoon of tanks, two companies of motorcycle troops, a motorized rifle company, and a platoon of armored personnel carriers with some signal equipment that penetrated to a depth of 30 kilometers and destroyed eighty German vehicles and 200 soldiers as well capturing prisoners and documents from a German corps headquarters. (19)

This type of reconnaissance was performed by a forward rifle battalion or an ad hoc reconnaissance group composed of a rifle company or battalion reinforced with artillery, mortars, tanks, and combat engineers. The higher commander personally determined the intelligence he desired and assigned the forces to gain it. In January-February 1944, the Soviets were attempting to pinch off a German salient south of Kiev against Army Group South. The Kovsun-Shevchenkivskiy Operation was to be conducted by the First and Second Ukrainian Fronts with Rotmistrov's 5th Guards Tank Army leading the attack. Rotmistrov ordered his corps commanders to attach 3-5 tanks to forward rifle battalions and conduct reconnaissance in force attacks on the day prior to the main assault. At 0630 on January 24, the reinforced rifle battalions launched their attacks and only penetrated 2-5 kilometers in depth

along a 16 kilometer front. However, they had determined the enemy's strength and the location of his main defense belt which was Rotmistrov's intent. The next day the main assault was launched with intimate knowledge of the enemy's defense. (20)

In July 1944, Soviet forces were on the move. The First Ukrainian Front was conducting a breakthrough operation south of Brody in the Ukraine. XV Rifle Corps of the 60th Army had been designated to breakthrough the German defenses. The corps commander detailed the 1128th Rifle Regiment of the 336th Rifle Division to attack in regimental strength several hours before the main attack to determine the German disposition in sector. In addition, an adjacent sector of the 1987th Rifle Regiment of the 322d Rifle Division was to attack simultaneously in battalion strength. These two combat reconnaissance operations were to glean intelligence on the German strength as well as force commitment of the Germans' reserve prematurely. At 0515 14 July, the attacks were launched and fierce fighting erupted along the front line of German defenses. Very quickly the German 349th Infantry Division was forced to commit its reserve, the 349th Reconnaissance Battalion and the 913th Infantry Regiment. As a result, the Germans were left without options when the main assault forces of the 60th Army crashed into them at 1430 the same day.(21)

V. ANALYSIS

The Soviets placed a great deal of importance on tactical reconnaissance in both editions of their field service regulations

during the Great Patriotic War. The Germans ended the war with a healthy respect for Soviet reconnaissance efforts. They characterized the Soviets as masters of infiltration techniques in their ability to get large numbers of dismounted infiltrators into rear areas to determine boundaries, command post locations, reserve assembly areas and to take prisoners. Their heavy combat forces performed the close combat reconnaissance and led the main assault forces in bad weather and limited visibility to disrupt preparations, determine main defensive belts, and force early commitment of reserve forces. (22)

Missions for Reconnaissance Forces: The light organic reconnaissance forces of Soviet rifle divisions were assigned the mission of conducting long-range reconnaissance infiltrations designed to glean the locations of command centers, reserve locations and movements, and subsequent defensive positions for the Germans. As the war progressed and the Germans became weaker as the Soviets grew in strength, the reconnaissance forces became heavier and heavier. Eventually, the acquisition of combat information began to give way to raids by ad hoc mobile reconnaissance groups supported by tanks, artillery, and infantry. By the late stages of the war, the reconnaissance mission was being carried out by heavily reinforced battalions and regiments that struck the German defenses a few hours before the main attack in order to unmask their defenses and force the commitment of reserves. The Soviets found a place for the services of dismounted reconnaissance troops sent deep into the enemy's defenses as well as heavy combat reconnaissance forces which could force the enemy to show his hand in the forward defenses. (23)

Stealth versus Fight for Intelligence: We find that the Soviets were capable of performing the stealth reconnaissance mission with dismounted infiltrators and could perform combat reconnaissance in up to reinforced rifle regiment strength. They obviously saw the need for both types of operations in developing the tactical intelligence required for mechanized war. Squad sized infiltration teams were to stay out of direct contact and engage any targets of opportunity with artillery, mortar, or air strikes. The combat reconnaissance patrols had tanks, artillery, engineers, and infantry and were expected to fight and force the Germans to show their hand. Both had a place in the Soviet concept.

Ad Hoc versus Organic Reconnaissance Force: With a reconnaissance company at division and a platoon at regiment the Soviets placed a great deal of dependence on ad hoc formations for the conduct of tactical reconnaissance. In addition, as reflected in both the 1936 and 1944 versions of the Red Army's Field Regulations, reconnaissance was the business of the commander and he was responsible both for directing the effort and assigning the necessary forces to conduct it. Tank, infantry, engineers, artillery, air forces, literally everybody had to integrate themselves into the acquisition of enemy tactical information. There was no excuse for failure to find out about the enemy. Officers were expected to reconnoiter attack axes, jump-off points, and enemy defenses personally as much as possible. (24) As a result, the Soviets did not reserve reconnaissance missions for specially selected and trained forces. Rather, when they desired specific combat information, they task organized combat forces to accomplish missions which would glean the appropriate information.

VI. AMERICAN TACTICAL RECONNAISSANCE

The American Army started World War II somewhat late in the development of a suitable doctrine for the prosecution of mechanized warfare. The I Armored Corps consisting of the 1st Armored Division (Fort Knox) and the 2d Armored Division (Fort Benning) under the command of Brigadier General Adna R. Chaffee was not formed until July 1940. (25) In that time frame the Germans had already demonstrated to the Poles, the French, and the British what future war would be all about.

Despite its late start, the mechanization of the American Army, once begun, proceeded vigorously. American force designers quickly recognized that the new armored divisions would need greater reconnaissance capabilities than was currently available to the standard triangular infantry division. The infantry division fielded a reconnaissance troop of 16 scout cars and each infantry regiment had an intelligence and reconnaissance platoon with 19 dismounted scouts. The armored divisions received a reconnaissance battalion with two reconnaissance companies, a light tank company, and an armored infantry company. Rather than three infantry regiments as in the triangular infantry division, the armored divisions possessed combat power consisting of an armored brigade (two light tank regiments, one medium tank regiment), a two battalion infantry regiment, and an artillery regiment with associated support units. (26) The Louisiana Maneuvers conducted in September 1941 called for a reorganization which stressed firepower

and mobility for the division. As a result, in March 1942 the division eliminated the brigade headquarters and replaced it with two identical command and control units referred to as combat commands. The combat power of the division was reorganized to reflect two tank regiments with three battalions each, a three battalion infantry regiment, and an artillery regiment with three self-propelled battalions. The reconnaissance battalion lost its infantry company and gained an additional reconnaissance company. (27) It was with this armored division that America went to war.

The reconnaissance battalions of the two armored divisions (81st Reconnaissance Battalion--1st Armored Division, 82d Reconnaissance Battalion--2d Armored Division) entered combat believing that "the best reconnaissance is performed by stealth." (28) Despite the assurances of pre-war doctrine, their initiation into combat in North Africa led them to the startling conclusion that in many cases they would need to fight to extract information on the enemy.

Piecemeal commitment of the 1st Armored Division into combat at Sidi Bou Zid (east of Kasserine) in an attempt to stem the tide of a German attack and clarify a foggy enemy situation, and an unreinforced reconnaissance effort on the part of the 81st Reconnaissance Battalion resulted in the division being continually surprised by the Germans and eventually decimated. Inadequate command and control arrangements and inexperienced American soldiers certainly contributed to the defeat, however, the Americans were learning that strong combined arms formations were required to gain a clear picture on the battlefield. (29) The 1st Armored

Division's debacle at Kasserine Pass against the Afrika Korps in January-February 1943 came after warnings from Major General C. L. Scott who recognized that the Germans were using strong combined arms reconnaissance forces that could fight to execute their mission. He advocated late in 1942 an organization of "reconnaissance units possessing the necessary power to engage in combat against very strong and mobile opposition." (30) Mere stealth and observation was not going to be adequate; units would have to fight to be successful.

American combat experience at Kasserine and in North Africa precipitated certain principles of reconnaissance operations and the use of combat forces. Reconnaissance forces could be expected to do certain things without augmentation and gaining information on the terrain would be one of those. Avoidance of combat was more difficult unless a force was trained and equipped to rapidly return fire and break contact. In many cases, an engagement would so consume the attention of a reconnaissance force that it would neglect its intelligence gathering mission. Based on this type of experience, it was concluded that the intelligence gatherers had to be supported with combat troops to enable them to conduct reconnaissance. In other words, if the mission was going to require combat, the reconnaissance troops had to be reinforced. (31)

However, the commander should carefully reflect before sending his reconnaissance battalion solely to conduct combat missions and should be prepared to rapidly reconstitute their losses or accept a degradation in his collection effort. (32)

After the Kasserine debacle, the units lost no time

incorporating their lessons learned into standard procedures.

Captain Jack H. Ficklen who fought with a reconnaissance squadron in Tunisia concluded that since the squadron was required to fight for most of its information, the formation of a combined arms team with tanks, artillery and infantry was a prerequisite for reconnaissance. He found that the most effective team for reconnaissance was a scout platoon cooperating with a tank platoon. (33)

LTC Charles J. Hoy, the commander of 81st Reconnaissance Battalion in North Africa, noted that the typical reconnaissance mission culminated in a meeting engagement which forced the reconnaissance elements to seek cover and return fire. The development of the situation for reporting to higher headquarters required a significant combat ability on the part of the reconnaissance battalion. (34)

By the time the Americans had captured Sicily and begun the tortuous journey up the Italian boot, the typical operation for an armored division reconnaissance battalion involved task organizing a combined arms team which could be reinforced to lead the combat commands in an attack or movement to contact. (35) This type of experience in the rough terrain of Italy put a premium on strong reconnaissance forces which could force the Germans to reveal the nature of their defenses.

After the invasion of mainland Europe in June 1944 and the occupation of terrain more suitable to mechanized warfare, reconnaissance became one of many continuing challenges for the American soldier. The tank division was reorganized once again in 1943 with the addition of an additional combat command and the

removal of all the regimental headquarters. The division fielded three tank battalions, three infantry battalions, and three self propelled artillery battalions. The reconnaissance battalion saw its assault guns consolidated into an assault gun troop and an additional reconnaissance troop organized. These light armored divisions (fourteen in all, excluding the 1st and 2d Armored Divisions) saw most of their combat in Europe following the Normandy invasion. (36)

The Germans fought tenaciously to hold the Allies in the Normandy beachheads. After the breakout, the rapid advances of American units were, nevertheless, opposed by determined defenses put up by the Germans at critical riverlines. In early September 1944 the 80th Infantry Division was attempting to secure crossings over the Moselle River. They were facing elements of the 3d Panzer grenadier Division and the 92d Luftwaffe Field Regiment. In order to gain information on the nature of the German defenses, the commander, MG H. L. McBride, committed an entire infantry regiment, the 317th, into a reconnaissance in force on Pont-à-Mousson on 4 September. The attack revealed the extensive defensive system constructed by the Germans, but failed to gain a foothold on the far bank of the Moselle. However, this type of tactical reconnaissance permitted the division to redirect its efforts to less well-defended sectors and cross the Moselle at Dieulouard on 12 September. (37)

The December 1944 Ardennes Offensive by German Army Group B presented the Allies with the dangerous possibility of being soundly thrashed and ejected from Europe. It provides us with some interesting insights into the use and misuse of reconnaissance units on a fast moving mechanized battlefield.

In early December, the reconnaissance troops of the infantry divisions along the Ardennes sector were performing light screen and outpost missions as they expected little or no enemy activity. When the German juggernaut broke loose on the 16th of December, they were as surprised as anyone else and, in most cases, fought until overrun or outflanked and forced to retire or surrender. (38)

The reconnaissance troops performed better where they were reinforced. In the 4th Infantry Division on 17 December, the troop was reinforced with elements of an engineer battalion and tank battalion to form Task Force Lockett. It successfully blocked the advance of the 276th Volksgrnadier Division by occupying high ground on the southern shoulder of the "Bulge" in the vicinity of Muellertal. (39)

As the Battle of the Bulge developed, the Allies were able to bring some of the tank divisions into the fray. In the battle for St. Vith, the 7th Armored Division used its 87th Cavalry Reconnaissance Squadron in combined arms teams to bolster defensive positions around the critical road center, force the Germans to divert their forces, and strip away their reconnaissance. The defensive effort around St. Vith threw the German timetable off by nearly five days. (40)

The other cases are similar. In each of them the reconnaissance squadrons were committed early and reinforced to guard or cover their parent division's deployment into battle. The 3d Armored Division deployed its 83d Armored Reconnaissance Battalion reinforced by infantry, tanks, artillery, and engineers into three task forces to block the main avenue leading to Liege and

screen the deployment of the division's lead combat command. They ran into the lead forces of the 116th Panzer Division and the 2d SS Panzer Division and sustained heavy casualties. Nevertheless, they forced the Germans to stop and deploy while enabling the 3d Armored Division to finish its redeployment. (41)

VII. ANALYSIS

What is critical to remember from the World War II operations of reconnaissance forces in Europe is that in mechanized warfare the situation rapidly became very fluid and units found themselves performing missions for which they were neither prepared nor equipped. The primary concern for higher commanders was the generation of combat power. In fact, a study conducted after the war indicated that American reconnaissance units were tasked to perform reconnaissance only 3% of the time. The remainder of the time they were required to perform offensive/defensive combat, special operations, or security missions. (42)

Missions for Reconnaissance Forces: Just as the Germans and Russians had, the Americans soon discovered that a clear delineation between reconnaissance missions and combat missions was not possible for reconnaissance formations. The acquisition of combat information frequently required combat--sometimes, heavy combat. As a result, combat command and division commanders found that their reconnaissance battalions had to perform as advanced guards, forward detachments, mobile reserves, and secondary attack formations, in addition to performing reconnaissance missions.

Stealth versus Fight for Intelligence: Prior to the war, stealth was recognized as the appropriate means of obtaining intelligence. However, in North Africa, it became obvious that the mechanization of warfare had added significantly to its dimensions and rapid reconnaissance was going to require that the scout fight for his information. Combat in Western Europe demonstrated that, while stealth still had a place in reconnaissance and the scout should not be looking for combat, time and the enemy would not cooperate. The typical reconnaissance mission was punctuated by surprise combat and the scout had to be prepared to win that fight. MG C. L. Scott predicted in late 1942 that, "We'll never win the war by observation alone or by units organized to observe--but by fighting units that can both observe and do some killing." (43)

Ad Hoc versus Organic Reconnaissance Combined Arms: As originally organized, the reconnaissance troop and battalion were light, combined arms formations. The heavy nature of combat, however, demanded that they be reinforced to perform the missions they were assigned. As a result, the typical reconnaissance mission saw frequent additions of supplemental combat power. The fast-paced nature and fluidity of modern battle further complicated the clear delineation of jobs that each unit was expected to perform.

VIII. CURRENT SOVIET AND AMERICAN ORGANIZATIONS AND DOCTRINE

In line with their experiences in the Great Patriotic War, the Soviets today continue to emphasize reconnaissance as a critical

function of every combat formation. "Ground forces tactical reconnaissance" is performed by all combat units and includes the organic assets of divisions and regiments as well as the combat units themselves. Typically, the missions include efforts to determine the organization of the enemy's defenses, the location of anti-tank forces, command and control facilities, strength and composition of the enemy formations, location of reserves and their movements, as well as the nature of the terrain and routes through the region. "Reconnaissance is the collection of intelligence information about the location, disposition, composition, number, armament, combat preparedness, character of activities, and intentions of the enemy in the interests of combat." (44)

To conduct ground forces tactical reconnaissance or "troop reconnaissance", each motorized rifle and tank division has a reconnaissance battalion and each regiment has a reconnaissance company. The reconnaissance battalion has two BMP reconnaissance companies with tanks and BMPs and a scout car company with BRDM scout cars for a total of six medium tanks, thirteen scout cars, fifteen armored personnel carriers, and four chemical reconnaissance scout cars. This force is capable of forming six to eight reconnaissance groups each with two or three scout cars or armored personnel carriers and a tank. They are expected to infiltrate to a depth of 50 to 100 kilometers forward of the division main body and gain information on the preparedness of the enemy's defenses in depth, the nature of deep obstacles, and the location of reserves and command and control nodes. (45)

The reconnaissance company at regiment has a BMP scout platoon.

a scout car platoon, and a motorcycle section for a total of four armored personnel carriers, four BRDM scout cars, and three motorcycles. The reconnaissance company operates to a depth of 25 to 50 kilometers with three or four detachments consisting of a scout car, an armored personnel carrier, a motorcycle, and occasionally reinforced with an infantry squad or a tank. Their focus is somewhat more immediate on the nature of forward defenses, unit boundaries, artillery and mortar locations, and local counterattack forces. Typically, they occupy observation and listening posts, or conduct raids and ambushes to gather prisoners or destroy enemy reconnaissance forces. (46)

Line units of Soviet formations retain a significant responsibility for their own reconnaissance. Motorized rifle and tank companies are trained to form reconnaissance patrols and advanced guard units which operate 3 to 8 kilometers forward of the battalion main body. They will form two or three patrols which would be expected to operate 10 kilometers apart and penetrate 15 to 30 kilometers. Typically, such formations are reinforced with an engineer squad, additional infantry or tanks, and an NBC reconnaissance patrol. They are expected to defeat enemy reconnaissance units and gather combat information on the enemy's forward defenses, gaps in his lines, minefields and other close-in obstacles, as well as to deceive the enemy as to the location of the main thrust. (47)

The battalion, in addition to being responsible for its own reconnaissance, will frequently be reinforced to perform a reconnaissance in force mission for the regiment. A battalion

furnished with artillery, engineers, additional infantry or tanks, forms an advanced guard operating 15 to 20 kilometers forward of the regiment to overcome light resistance and enemy reconnaissance forces, distinguish enemy defensive positions and prevent the commitment of the regiment to a disadvantageous situation. (48) The regiment is also capable of being committed into a similar role for the division. A regimental reconnaissance in force is performed by a potent ground combat force used to gain information on the enemy by forcing him to react through the commitment of his reserve or the massing of his artillery fires. Such a mission allows the commander to engage the enemy and force him to expend considerable effort against what could very well be a deception effort to mask the Soviet's main effort. (49)

In the defense, the Soviets will attempt to extend a security zone as far forward as 50 kilometers from its main defensive belts using the division reconnaissance battalion and the regimental reconnaissance companies. These forces will form reconnaissance patrols to provide early warning and strip reconnaissance assets away from an attacking enemy. As the attacker gets closer, second echelon battalions manning a security belt up to 15 kilometers forward of the main defenses will attempt to force the attacker to deploy and deceive him as to the true location of the main defenses. These battalions will occupy platoon and company strongpoints reinforced with obstacles and long range anti-tank weapons. (50)

The formation of these reconnaissance groups or detachments has an historical basis in the Great Patriotic War and the overwhelming importance of reconnaissance in the Soviets' eyes have led them to

give their line combat units a significant role. The formation of ad hoc reconnaissance groups to gain combat information is essential to fluid mechanized warfare on the nonlinear battlefield.

American doctrine at the higher tactical levels (division) places a great deal of dependence on electronic means of combat information gathering. As a result, the organic ground reconnaissance capabilities of the heavy division are centralized in the battalion scout platoons and the divisional cavalry squadron. Nevertheless, maneuver battalions and brigades will have a significant role in the conduct of ground reconnaissance.

As articulated in FC 71-100 Armored and Mechanized Division and Brigade Operations, line battalions are contributors to the division's information pool along with the cavalry squadron, military intelligence and electronic warfare assets, target acquisition and air defense units, and the military police. In the division conduct of a movement to contact, the divisional cavalry squadron shares the advanced guard mission with line battalions. The battalion scout platoons are placed on the flanks to screen the division movement. (51)

FC 71-3 The Armor and Mechanized Infantry Brigade and FM 71-2 The Tank and Mechanized Infantry Battalion Task Force describe how the line units of these organizations are tasked to perform the advanced guard mission or covering force for the main body. The reinforcement of organic reconnaissance assets with combat or combat support assets other than an infantry platoon is not discussed, however. (52)

IX. CONCLUSIONS

The review of American doctrinal literature demonstrates that cavalry squadrons, scout platoons, and maneuver battalions share a significant role in the conduct of tactical reconnaissance. History indicates to us that they will share a significant role in the conduct of combat operations, as well. The lesson to be drawn is that modern warfare will require tactical reconnaissance formations that can gather information by both stealth and the conduct of classic combat missions such as attack and defend.

Does our training accomplish this task? The ARTEP Manual, ARTEP 71-2 Army Training and Evaluation Program for Mechanized Infantry/Tank Task Force, has reconnaissance missions for the battalion scout platoon and patrols for infantry squads. (53) There is a noticeable gap in the requirement for task forces to perform any reconnaissance beyond that. FM 17-95 Cavalry Operations, when discussing the "how-to's" of reconnaissance does not include the possibility of being reinforced or a description of appropriate utilization of a tank company or artillery battery or engineer company. (54) At some point during future combat, the cavalry squadron will be employed to conduct a combat mission other than stealth reconnaissance. When this occurs, augmentation is likely to be required.

The tank or mechanized infantry battalion has a scout platoon consisting of six M2 Bradley Fighting Vehicles. Brigades have no organic ground reconnaissance organization. The divisional cavalry squadron has two cavalry troops and two air cavalry troops for a

total of forty M2s and six 4.2 inch mortars on the ground and eight attack helicopters and twelve observation helicopters in the air.

(55) There is obviously a great deal of capability in these organizations, however, their size indicates that they will need to be augmented with other forces on frequent occasions.

For the Germans and the Americans entering World War II, light, mobile reconnaissance units were expected to perform the tactical reconnaissance mission using stealth to derive the information necessary for the commander to deploy his combat forces. Reconnaissance formations would have to fight for short periods of time, however, reinforcement would rapidly free these units to return to their stealthy search for combat information.

The practice of mechanized warfare brought the realization that the enemy was not going to stand idle and allow himself to be observed by light, mobile forces. Reconnaissance units were going to have to fight across North Africa, Western Europe, and the Russian steppes to gain information on the enemy. They were going to have to attack, defend, scrap and scrape for intelligence. There was no easy way. Tankers, infantrymen, engineers, artillerymen, as well as scouts and cavalrymen would be involved in this fight for intelligence and it would be difficult to distinguish between reconnaissance and combat. As a result, they concluded that they must fight for combat information, that they must task organize combined arms formations to gain it, and that special reconnaissance units would have to perform missions other than reconnaissance much of the time.

The Russians appeared to understand this from the start and

continue to do so based on their present organization and doctrine. Their line units retain a significant responsibility for the conduct of reconnaissance and executed this responsibility frequently in the Great Patriotic War. There is a place for stealth reconnaissance tactics in Soviet doctrine, but they continue to place a great deal of faith in a reinforced motorized rifle battalion's ability to force an enemy commander's hand by vigorously attacking him.

In order for the American heavy armored or mechanized division to defeat the attack of a Soviet combined arms army, the divisional cavalry squadron and ten battalion scout platoons will have to face an impressive array of combat assets dedicated to preventing them from distinguishing the army's main attack and to finding our division's main defenses and preparations. In addition to the organic regimental reconnaissance companies (ten to fifteen companies) and divisional reconnaissance battalions (three to five battalions), the Soviet army commander could also deploy three independent tank battalions and an independent tank regiment as forward detachments. With three additional divisional advanced guards in regimental strength along a 60 to 100 kilometer front, the cavalry squadron and the scout platoons must distinguish the enemy's main attack in the face of considerably more combat power than they can reasonably be expected to handle. (56) Rough estimates pit nearly 800 Soviet combat vehicles dedicated to reconnaissance and security against approximately 100 reconnaissance vehicles of the squadron and scout platoons resulting in an overwhelming 8:1 combat ratio in the Soviets' favor. American military intelligence units, aviation assets, and some combat forces will address this ratio for

the heavy division; however, it will call for a much more significant effort than that envisioned in current American doctrine.

The Soviet regiment defends a 15 to 30 kilometer frontage. In an attack against a single regiment our division's reconnaissance forces can expect to confront six to eight reinforced outposts up to 50 kilometers forward of the main defenses, as well as three or four company strength strongpoints up to 15 kilometers forward. (57) Once again, a rough estimate pits 60 to 80 combat vehicles opposing the combined strength of the cavalry squadron and scout platoons; a 5:3 combat ratio barely in our favor and, more than likely, closer to 1:1 given that some of the battalion scout platoons will be withheld in reserve with their battalions. It is not difficult to imagine that this type of security arrangement could very well frustrate the efforts of the squadron and the scout platoons to get deep into the enemy's defenses and determine important combat information.

Faced with this kind of shortfall in capability, what can be done? There appear to be two solutions. The first solution is a significant increase in the capability of the divisional cavalry squadron by the addition of a third ground troop and, possibly, the reinforcement of the troops with tanks and artillery. Scout platoons need to be strengthened and serious thought must be given to the creation of a brigade reconnaissance troop. The sum total of this strengthening effort would have to result in at least an additional 100 combat vehicles for the reconnaissance units to give them close to a 3:1 superiority in the division attack and no worse than a 4:1 inferiority in the defense.

A second solution would not alter the organization of the divisional squadron or the battalion scout platoons. These units would continue to be the prime performers of tactical reconnaissance for the division. It would refocus an emphasis on the reconnaissance mission of line tank and infantry units and warn other combat support assets to be prepared to participate in the combined arms reconnaissance missions. The assistance of two tank battalions in the reconnaissance effort for a division would contribute approximately 100 combat vehicles toward improving the combat ratio for the reconnaissance formations. At the same time, the cavalry must prepare to conduct more classic combat missions. The study of history demonstrates significant time and effort was devoted to the performance of missions other than "stealth" reconnaissance.

If we can look to World War II to forecast conditions for future combat, it is apparent that reconnaissance formations must be prepared to fight for their information, perform missions other than reconnaissance, and task organize ad hoc units when the situation calls for it. The tank and mechanized infantry battalions and companies of the U. S. Army are going to perform reconnaissance in future combat; they are going to reinforce cavalry squadrons; and they are going to receive troops and scout platoons in reinforcement to accomplish attacks, defenses, delays, and guards. It is the nature of the nonlinear battlefield. The training manuals and how-to-fight manuals need to reflect this by restoring the basic reconnaissance missions to the task listings for battalions and companies and requiring the cavalry squadron to be prepared to operate with attached assets in the performance of its mission.

The historical analysis of division reconnaissance operations points out that we need a flexible reconnaissance organization. Experience indicates that a number of tanks, armored personnel carriers, scout cars, motorcycles, and helicopters will be conducting reconnaissance in the next war. Operations at the National Training Center would appear to confirm that successful reconnaissance is performed by task organized units of combat and combat support that are well-trained in working on the reconnaissance mission. (58) We must be prepared to task organize for reconnaissance and give ourselves that flexibility; to organize to fight for intelligence as well as acquiring it through stealth; and, finally, to prepare for the performance of reconnaissance missions by every organization in our force. It's not just up to the scout.

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